

NOTES AND DESCRIPTIONS OF A FEW NORTH  
AMERICAN DOLICHOPODIDÆ (DIPTERA).

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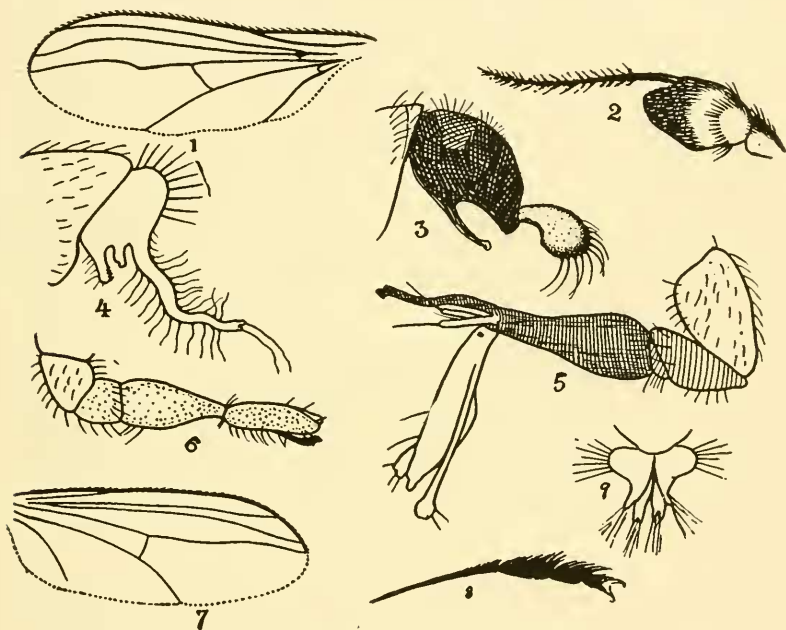
*Diaphorus hirsutus* sp. nov.

Male: Length 4-4.5 mm.; of wing 4 mm. Face narrow, silvery white. Palpi yellow, proboscis brownish. Front nearly opaque with grey pollen, the ocular tubercle more blackish; ocular bristles long, a bristle close to the orbit on each side curves forward. Antennæ black; first joint long, hairy above; second joint large with rather long bristles at tip; third small, not as large as second, rounded at tip; arista basal, long, pubescent. Lateral and inferior orbital cilia whitish, five or six of the upper cilia on each side black.

Thorax nearly opaque with brown pollen, the median line on the dorsum and the scutellum green, quite shining; acrostichal bristles small, in a single row; six large dorsocentral bristles on each side; scutellum with four large bristles on its margin; pleuræ more blackish with grey pollen, its posterior edge yellow. Abdomen yellow with the posterior edge of first segment, large triangles on the dorsum of second, third and fourth, which nearly reach the preceding segment on the median line and the sides on the posterior margin of the segments, and nearly the whole of fifth and sixth segments, shining green or bronze; hairs on the dorsum rather long, especially near the base of the abdomen, those on the sides of the abdomen yellowish. Hypopygium rather conspicuous, blackish, still more or less yellow towards the ventral point; its appendages small brownish lamellæ, it has about four rather long and conspicuous, although not very stout bristles at tip.

Coxæ yellow; middle pair with a blackish streak on outer side; fore and middle pairs with black bristles on the apical half of their anterior surface. Femora and tibiæ yellow, very hairy; fore femora with a few slender bristles on the apical part of the lower posterior edge, which are as long as the width of the femora; posterior femora infuscated on apical half of upper surface, and the slender hairs of their lower surface as long as the width of the femora; bristles on upper surface of the tibiæ small and incon-

spicuous. Tarsi hairy, more or less blackish from the tip of the first joint; fore and middle tarsi nearly as long as their tibiae, the former with fourth and fifth joints of about equal length. All fifth tarsal joints with bristle-like hairs at tip; their pulvilli much enlarged and with the empodium also elongated and hairy, appear-



#### EXPLANATION OF FIGURES.

Fig 1, *Diaphorus hirsutus* sp. nov., wing; Fig. 2, *Proarchus violaceus* sp. nov., antenna; Fig. 3, *Proarchus violaceus* sp. nov., Hypopygium; Fig. 4, *Leucostola terminalis* VanDuzee, hypopygium of male; Fig. 5, *Thripticus longicauda* sp. nov., hypopygium of male; Fig. 6, *Thripticus nigripes* sp. nov., hypopygium of male; Fig. 7, *Paraclius ornatus* sp. nov., wing; Fig. 8, *Paraclius ornatus* sp. nov., last four joints of fore tarsus; Fig. 9, *Paraclius ornatus* sp. nov., outer appendages of the hypopygium of male.

ing like claws when seen with a low-power lense; hind tarsi scarcely as long as their tibiae, the first and second joints of nearly equal length. Calypters and halteres pale yellow, the former with a brown tip and yellowish cilia.

Wings (Fig. 1) grayish; first vein reaching a little more than one-third the distance from the root of the wing to tip of second vein; third vein bent backward at tip; last section of fourth vein with a quite abrupt bend at a point opposite the tip of fifth vein,

from which point it is parallel with third vein and ends in the apex of the wing; sixth vein reaching the wing margin; anal angle rounded but rather full, the wing being of somewhat parallel width.

Female: Two females which seem to belong here have the face wide, still rather narrow for a female, white. They have only the second and third abdominal segments yellow on the dorsum, these have the same metallic triangles as are found in the male; the legs and feet have only short hairs; the scutellum has one pair of bristles; the second vein reaches only half the distance to the tip of second; last section of fourth vein is nearly straight and parallel with third.

Described from three males and two females from California; the males were taken at Berkeley, Calif., May 10, 20 and 28, 1915; the females at Alpine, San Diego County, April 8 and 11, 1915. Type in the author's collection.

#### **Diaphorus fuscus** nom. nov.

*D. adustus* Van Duzee, Bulletin of the Buffalo Society of Natural Sciences, Vol. XI, p. 173, 1915, as the name *Diaphorus adustus* Wied. of Europe has precedence. I would change the name of my species to *Diaphorus fuscus*.

#### **Leucostola terminalis** Van Duzee.

In the Entomological News, Vol. XXV, p. 405, I described a female under this name. Since then I have seen several male specimens, one of which is in my collection. It agrees with the female described in having the first antennal joint wholly yellow, it also has the reddish coppery stripes above the root of the wing, although they are not as conspicuous and are divided into two spots, one at the suture and one above the root of the wing. It has the last two joints of the middle tarsi, a little flattened, of about equal length, each nearly as wide as long, the two taken together about as long as the third joint; hind tibiae black at tip for nearly one-fourth their length; hind tarsi wholly black, the second joint a little longer than the first; last section of fourth vein only a little bent at its middle; hypopygium (Fig. 4) with its lamellæ developed into long hairy filaments, and with two bristles at tip, which are slender and hair-like.

**Proarchus** (*Phylarchus*) Aldrich.

Dr. Aldrich described this genus from two females taken in Mexico, and has placed the genus in the Thinophilinæ. I have a species found in New York and Virginia which I am placing in that genus. It has the antennæ and plumose arista as in his species, the face of the female is as he described it (about as in *Pelastoneurus*). My specimens have distinct acrostichal bristles, while his species was destitute of these bristles. The hypopygium of this new species is large, extending forward under the venter, as in *Dolichopus* and its lamellæ are as in that genus (fig. 3). If the male of his species proves to have the hypopygium as in my species, it would place the genus in *Dolichopodina*, I should say after *Polymedon*, or perhaps after *Sarcionus* and next to *Pelastoneurus*, from which it is separated by its nearly parallel third and fourth veins.

This would place the genus near the European genus *Poecilobothrus* Mik. The female of the only species of that genus that I have seen, *P. nobilitans*, has the face formed very much as in *Pelastoneurus* and has a plumose arista. I should place our species in that genus, only the second and third veins are not approximated nor the wing of the male ornamented with black as in all species of *Poecilobothrus* known to me.

**Proarchus violaceus** sp. nov.

Male: Length 4–4.5 mm.; of wing 4 mm. Face wide, covered with grayish-white pollen, sometimes almost silvery, upper portion a little concave and with a slightly depressed median line, the lower part rather short and slightly convex. Front dark violet, sometimes almost black, a little dulled with brown pollen. Palpi yellow with black hairs and a little white pollen. Antennæ (fig. 2) yellow; third joint sometimes mostly brown, short, somewhat oval in outline; arista dorsal, distinctly plumose, although the hairs are not long. Orbital cilia wholly black.

Dorsum of the thorax violet with the lateral and anterior margins quite broadly greenish; acrostichal bristles rather large, in two rows; scutellum violet with two large and two very small bristles on its margin; pleuræ more black with gray pollen. Abdomen green with white pollen; incisures black; hind margins of segments with stiff black bristles. Hypopygium (fig. 3) formed

about as in *Dolichopus*, black, greenish on basal half; its lamellæ large, somewhat oval but tapering into the stem, yellowish with a wide black border on the apical margin, which is jagged and fringed with long black bristles.

Coxæ, femora and tibiæ yellow; middle coxæ blackened on outer surface, hind ones a little infuscated at base; fore coxæ covered with black hairs on their anterior surface, hind ones with one large and one small bristle on outer surface. Middle and hind tibiæ each with four blackish spots on upper surface where the bristles are inserted. Fore tarsi a little longer than their tibiæ, a little blackened from the tip of the first joint; middle and hind tarsi black from the tip of the first joint, the latter with the first joint distinctly shorter than the second. Calypers and halteres pale yellow, the former with black cilia.

Wings grayish, tinged with brown in front of the third vein; broad, distinctly expanded at tip of fifth vein; anal angle prominent, although the hind margin of the wing is slightly excavated at tip of sixth vein; costa slightly thicker from the tip of the first vein; last section of fourth vein nearly straight, ending a little before the apex of the wing, nearly parallel with third vein, which is a little bent backward so as to approach fourth vein a very little at tip; cross-vein a little more than its length from the wing margin, measured on fifth vein.

Female: Face a little wider than in the male; color of head, thorax, abdomen and legs as in the male; wings as in the male, but not quite as wide at tip of fifth vein.

Described from three males and three females; I took the holotype and allotype at Dayton, Erie County, N. Y., July 5, 1920; two males were taken by Mr. Banks at Falls Church, Va., May 30; one female was taken by Mr. Hine at Kent, Ohio, June 18; and one female was taken at Bridgewater, Mass., July 11.

*Table of North American Species of Thripticus. Males.*

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| 1. Femora black, or green.....  | 2                      |
| Femora yellow.....  | 4                      |
| 2. Hypopygium with yellow lamellæ (Calif.), <i>longicauda</i> sp. nov.<br>Hypopygineal lamellæ brown..... | 3                      |
| 3. Hypopygium somewhat oval in outline, rather thick<br>(Calif., Mex., N. Y.).....                        | <i>fraterculus</i> Wh. |

- Hypopygium rather slender, tapering towards its apex, more conical than oval (Nev.).....*nigripes* sp. nov.
4. Venter and part of the dorsum of the abdomen yellow..... 5  
 Abdomen without yellow, except sometimes on the venter.. 6
5. Whole of sixth abdominal segment and base of the hypopygium yellow (W. I.).....*cupuliferous* Ald.  
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6. Hypopygium ovipositor-like, bent under the abdomen (W. I.).....*singularis* Ald.  
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8. Antennæ yellow, or yellowish..... 9  
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9. Capsule of hypopygium truncate at tip (Fla.)...*vietus* V. D.  
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11. Lamellæ nearly round in outline (Wis., N. Eng., Mo., N. Y., Ill., Wyo., Ont.).....*willistonii* Wh.  
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*aurinotatus* V. D.  
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 Dorsum of thorax green; hypopygium rounded at apex, its lamellæ rounded at tip (N. Y., Ont.).....*comosus* V. D.

***Thrypticus nigripes* sp. nov.**

Male: Length 1.75 mm. Face, front, thorax and abdomen dark shining blue-green. Face very narrow below. Antennæ and mouth parts black. Bristles of the thorax and the conspicuous hairs on the abdomen yellow. Hypopygium blue-green, its hairs yellow;

the lamellæ brown, large, about as long as the main portion of the hypopygium, rather bare (fig. 6).

Coxæ, legs and feet black, except the extreme tips of the coxæ and the trochanters, which are yellowish. Calypters, their cilia and the halteres yellow.

Wings nearly hyaline; third and fourth veins nearly parallel.

Female: Face a little wider; otherwise about as in the male.

Described from one male and two females which I took at Wells, Nev., June 6, 1915. Type in the author's collection.

The wings in all my specimens are in poor condition. This is very much like *T. fraterculus* Wh., it differs in having the capsule of the hypopygium conical, not oval as in Wheeler's species, and the lamellæ much longer and less hairy.

#### ***Thrypticus longicauda* sp. nov.**

Male: Length 3 mm. Face green, narrow below, the lower edge and the palpi covered with white pollen. Front blackish. Antennæ black, small. Lateral and inferior orbital cilia white. Frontal bristles black.

Thorax green with bronze reflections; there is but one bristle left on the thorax and that is black with the tip more whitish, the minute hairs on the anterior portion are yellow. Abdomen long and slender, green, its hairs and the bristles on the hind margins of the segments are yellow, but they are small and inconspicuous. Hypopygium long and slender, green, its hair yellow (fig. 5); its lamellæ very long, yellow, with a few yellow hairs.

Fore coxæ yellow with white hairs, its basal half on the anterior surface green. Middle and hind coxæ and all the femora green, with the tips of coxæ, extreme base of middle and hind femora, apical third of fore, and apical two-thirds of middle femora, tips of hind femora, and all tibiæ and tarsi yellow. Fore and middle tarsi nearly twice as long as their tibiæ. Second joint of hind tarsi longer than the first. Calypters, their cilia and the halteres yellow.

Wings grayish; costa black; veins brown; third and fourth veins parallel, the fourth ending in the apex of the wing; last section of fifth vein nearly three times as long as the cross-vein.

Female: Face wider; thorax with black and yellow bristles mixed; coxæ and femora mostly black; tibiæ and tarsi yellowish

brown; fore tarsi scarcely one and a half times as long as their tibiae. Wings as in the male.

Described from one pair which I took at San Francisco, California, May 12, 1915. Type in the author's collection.

***Paraclius minutus* sp. nov.**

Male: Length 2.5 mm.; of wing 2 mm. Face rather narrow, covered with white pollen, the suture near apical third, lower portion flat. Palpi blackish with a little white pollen and black hairs. Front almost opaque with brown pollen. First two antennal joints yellow; third mostly brown, small, rounded at tip. Arista long with long pubescence, but scarcely plumose. Inferior orbital cilia whitish.

Thorax greenish, dorsum more brown with coppery reflections, which form a median vitta extending to the hind margin of the scutellum. The ante-alar black spots distinct but nearly divided by the green of the dorsum; when viewed from behind there are four silvery-white spots visible, a large one at the lower edge of the front end of the black spot, and a very small one above the root of the wing; pleauræ and coxæ covered with white pollen. Abdomen green; the spots of white pollen on its sides not very conspicuous. Hypopygium rather small, entirely sessel, black; its lamellæ quite small, black, they appear to be nearly bare on their edges.

Coxæ yellow, middle ones blackened on basal half, hind ones a little blackened at base; anterior pair with black hairs on their front surface. Femora and tibiae yellow. All tarsi black from the tip of the first joint. Calypters and halteres yellow, the former with black cilia.

Wings tinged with brownish gray; first section of costa not thickened, last section of fourth vein rather abruptly bent beyond its middle, beyond which it curves forward so the tip is near the tip of the third vein; last section of fifth vein a little longer than the cross-vein.

Female: About like the male in the width of the face, color and venation, except that the last section of the fifth vein is a little longer.

Described from two males and three females which I took in



Florida, four at Bradentown and one pair at Anna Maria Key, all in March. Type in the author's collection.

This is much like *P. quadrinotatus* Ald., but does not have the anta-alar spots divided as in that species, and these spots are not as large.

***Paraclius ornatus* sp. nov.**

Male: Length 3–3.5 mm.; of wing, the same. Face narrow, silvery-white. Palpi small, yellow, with a black bristle at tip. Proboscis yellow, with a fringe of little yellow hairs on its edge. Front silvery-white, widened above. Antennæ wholly black or with the lower edge of the first joint slightly yellowish; third joint small, about as long as wide, scarcely pointed at tip. Arista dorsal, pubescent. Lower orbital cilia yellowish, slender.

Thorax green with bronze reflections, a little dulled with white pollen; there are no ante-alar black spots. Abdomen green with quite abundant white pollen. Hypopygium small, but little longer than thick, extending forward under the venter, black with green reflections; its outer appendages look like small yellow lamellæ (fig. 9) with black bristles, but they seem to be united at base as in the figure; the inner appendages are darker and rather small, they are deeply slit into three parts at tip.

Coxæ, femora and tibiæ yellow. Fore coxæ with black hairs on the inner edge of their anterior surface; middle and hind coxæ each with a long black bristle on outer side, the former darkened on the outside. Hind femora scarcely darker at tip above, their tibiæ more distinctly brown at tip. Middle and hind femora each with a slender preapical bristle, the former also has smaller ones below near the tip. Fore tarsi (Fig. 8) more than one and a half times as long as their tibiæ, first two joints yellow with their extreme tips blackish, second slightly longer than the first and very thin, it is about as long as the last three joints taken together; third and fourth joints black, compressed and widened, fringed above with little black hairs; fifth yellow with the base narrowly black. Middle tarsi longer than their tibiæ, black from the tip of the first joint. Hind tarsi equal to their tibiæ in length, wholly black, still sometimes the first joint is yellowish at base, first joint shorter than the second. Calypters and halteres yellow, the former with yellow cilia, which appears nearly black in certain lights.

Wings (fig. 7) grayish; third vein bent backward at tip; last section of fourth vein bent at its basal third, approaching third, but bending back a little toward its tip so as to be parallel with third vein for its apical third and ending in the apex of the wing; last section of fifth vein twice as long as the cross-vein; anal angle of wing rounded but rather prominent.

Female: Like the male in general color and the form of the wings. The face is not very wide and is hollowed out almost to its lower edge; face and front wholly silvery-white, proboscis narrowly blackish on the edge, which is fringed with quite conspicuous black hairs. Ovipositor yellowish with a circle of short, blunt spines at tip. Fore tarsi blackened from the tip of the first joint; their second joint about three-fourths as long as the first.

This female is easily recognized by its venation, together with the silvery front and yellow proboscis and ovipositor.

Described from many males and females. I took them in Williamsville, Erie County, N. Y., August 8 and 29, 1920. Mr. Burns took many at the Palisades, N. J., July 5, 1920.

Holotype and Allotype in the author's collection and taken at Williamsville, N. Y.

Those I took were flying around the surface of the water which was running over the rocks, and resting on the moss and rocks in the little falls, very much as does *Liancalus*. The very short hypopygium would almost separate this species from *Paraclius*, but it is entirely disengaged although sessil and extends a little under the venter.

#### ***Paraclius ovatus* Van Duzee.**

This is the same as *Paraclius venustus* Aldrich, and is therefore a synonym of that species. Dr. Aldrich reports it as abundant in the West Indies and Mexico. I have seen specimens from Georgia and Costa Rica.